19. Explain the production of macromolecules. Write the advantages and disadvantages of capsule dosage forms.

20. Explain the preclinical and clinical models employed in new drug screening.

Shanmuga Industries Arts & Science College T.V.Malai

APRIL/MAY 2024

CEBT64B — PHARMACEUTICAL BIOTECHNOLOGY

Time : Three hours Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is the main principle of pharmacology?

2. Mention the different routes of drug administration.

3. Name two anticancer drugs and their application.

4. Why is microencapsulation important in pharmaceuticals?

5. What are the limitations of enzyme immobilization?

6. What is the basic principle of bioassay?

7. What is the advantage and disadvantage of immobilization of plant cells?

8. Which organ produces HGH? What is the role of HGH?

9. Mention any four techniques involved in new drug discovery.

10. Give examples of two commercially available soft gelatin capsules.

PART B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Define an enzyme. What are the factors affecting the enzyme kinetics?

Or

(b) Write a short note on streptokinase enzyme.

12. (a) Who developed the method for monoclonal antibody production? How are monoclonal antibody produced?

Or

(b) What is the function of clotting factor VIII in blood clotting?

13. (a) Describe the experimental models in bioassay.

Or

(b) What are the strategies involved in drug discovery?

14. (a) What is microencapsulation? Briefly explain microencapsulation by coacervation phase separation method.

Or

(b) What are the different methods for evaluation of microcapsules?

15. (a) Differentiate between pharmacodynamics and pharmacokinetics.

Or

(b) What are the different factors determining the route of drug administration?

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Write a brief history on pharmacology. How biotechnology played a role in the field of pharmacology?

17. What are antifungal and anthelminthic drugs? Give examples. Write about their mode of actions.

18. What is enzyme immobilization? Describe the various methods of immobilization.

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